

circular. Outer lip very narrowly reflexed, whitish, a little thickened within. Basal callus moderately spreading, whitish in the middle, elsewhere transparent.

Alt. 7.8, diam. 9.5 mm.

Alt. 7.2, diam. 8.3 mm.

Operculum thin, externally whitish at the nucleus and along the straight margin, a red area around the nucleus, outside of which it becomes pale blue, with a reddish bordering line; nearly smooth. Inside deep reddish, almost black, fading to whitish along the straight margin and near the nucleus. The straight edge is thickened outside and within.

Santa Marta Mts., Colombia, at Cacaguelito, at 1500 ft. elevation, on the ground in forest under decaying leaves.

A small edition of *H. sanctæmarthæ*, but differing in the less extensive basal callus, the minute sculpture, narrow lip, thinner shell and operculum. It is more globose than *H. tamsiana*. The coloring is similar in some specimens of *H. nemoralina* of Trinidad, but that shell has a more globular last whorl.

NOTES ON THE DISTRIBUTION OF THE PLEURODONTE ACUTA GROUP.

BY P. W. JARVIS.

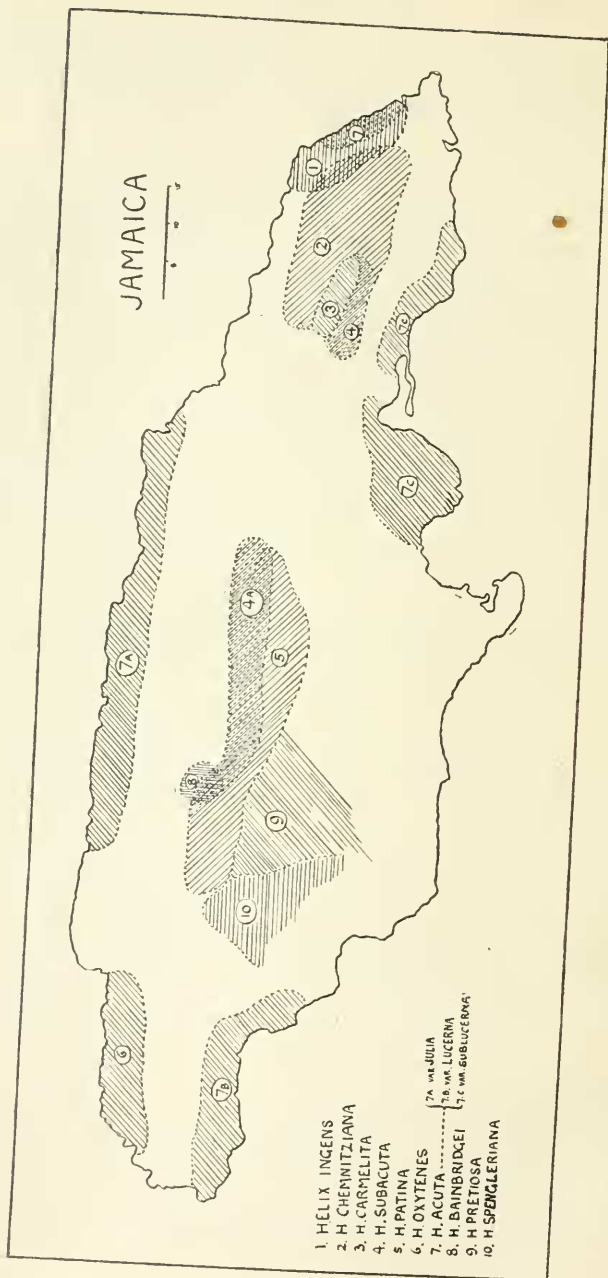
As most of the Jamaican land shells in museums and private collections, are usually labelled "Jamaica," a very vague locality, a few notes giving the areas in which some of the species live may not be out of place.

Belonging to the group of which *H. acuta* is type, seven species are recognizable:

1. *Pleurodonte ingens* (Adams).
2. *Pleurodonte chemnitziana* (Pfr.).
3. *Pleurodonte carmelita* (Fér.).
4. *Pleurodonte subacuta* (Pfr.).
5. *Pleurodonte patina* (Ads.).
6. *Pleurodonte oxytenes* (A. D. Brown).
7. *Pleurodonte acuta* (Lam.).

and three to the group of which *H. bainbridgei* is type.

8. *Pleurodonte bainbridgei* (Pfr.).
9. *Pleurodonte pretiosa* (Ads.).
10. *Pleurodonte spengleriana* (Pfr.).



1. *Pleurodonte ingens* (C. B. Ad.) is limited to the John Crow Mountains in Portland (No. 1 in map). It is a mountain species. The largest and most typical specimens come from Moore Town and its immediate neighborhood, but living or dead specimens are to be found scattered in all parts of this area amongst the limestone rocks.

The varieties described by Prof. C. B. Adams, viz., *indigna* and *imperfurata*, are not local forms, but simply individual variations, all three forms being occasionally found together.

2. *Pleurodonte chemnitziana* (Pfr.) has a much wider range than *P. ingens*, being scattered sparsely on the spurs of the Blue Mountain range, and found more plentifully towards the eastern limits of this area (No. 2). A small pale variety (which is otherwise typical), occurs at Bath, in St. Thomas parish.

3. *Pleurodonte carmelita* (Fer.) is limited to the higher regions of the Blue Mountain range. This species seems to thrive on the shaly soil, while all the other species are most plentiful in the limestone regions.

4. *Pleurodonte subacuta* (Pfr.) apparently has two habitats, the first on the southern slopes of the Blue Mountain range (No. 4 in map), where it is sometimes found in company with both *P. carmelita* and *P. chemnitziana*. The second habitat (No. 4 A) commences about thirty miles west, at Mount Diablo. Thence it occurs plentifully on the mountains running due west to Ulster Spring, where a few stragglers have been found. At present it has not been found in the intermediate space (which is very poor in land shells), but further search may possibly connect these two areas, or it may be found that the form of each area constitutes a distinct species.

5. *Pleurodonte patina* (C. B. Ad.) occupies a very large area. In the extreme east of it the variety *nobilis* of C. B. Adams is found on the slopes of Mount Diablo. A few miles west, at Cave Valley and Aenon Town, the largest and most typical form of *P. patina* crops up, and is undoubtedly the locality where Prof. Adams obtained his types. It spreads west through the higher parts of St. Ann's and Trelawny to Moore Town in St. James, gradually losing its most distinctive characteristics, such as the concavity of the shell above and below the periphery; though retaining both the smooth surface and the single small tooth.

6. *Pleurodonte oxytenes* (A. D. Brown) is limited to Hanover. It is a very clearly marked species, yet subject to considerable individual variation.

7. *Pleurodonte acuta* (Lam.) is found throughout the southern Parishes of St. Elizabeth, Manchester, Clarendon and St. Catherine; though in some localities slightly specialized forms occur, I have not yet been able to arrange them satisfactorily. As a rule the specimens from the higher lands are larger and with small teeth, sometimes only one tooth, whilst the coast and lowland forms are very small, and have large teeth.¹ The variety *acutissima* is not a local race, for in almost every locality of say three or four miles in extent it usually turns up as an acutely carinated form of the local variety.

7 A. *Pleurodonte acuta* (Lam.). The variety *julia* occurs on the hills near the sea on the northern coast. Acutely carinated shells with depressed spire are frequently found amongst the common and typical forms. This variety *julia* may ultimately prove to be the lowland variety of *P. patina*—not of *P. acuta*.

7 B. *Pleurodonte acuta*, var. *lucerna* (Müll.).² The most pronounced forms are found on the coast hills of Westmoreland. Further inland occur larger specimens with smaller teeth, and the aperture of the shell much wider. Prof. C. B. Adams' *fuscoblabris* is a color variety.

7 C. *Pleurodonte acuta* var. *sublucerna* (Pilsbry) occurs in the lowlands of St. Catherine and along the coast hills of St. Andrew. Near Yallahs there is a very small depressed shell with very large teeth and the umbilicus uncovered. Prof. C. B. Adams mistook this shell for *P. lucerna* of Müller, and so named it in his collection at Amherst College; so when he had the Westmoreland specimens brought to him he described them as new under the name of *fuscoblabris*. On the northeast slopes of the John Crow Hills, especially at Quaw Hill, a very large form of this umbilicated shell is found.

8. *Pleurodonte bainbridgei* (Pfr.) (No. 8 in map), occurs only in the neighborhood of Uster Spring in Trelawny. It is distinguished by having the spire very much depressed.

9. *Pleurodonte pretiosa* (C. B. Ad.) is very widely distributed, being abundant in Manchester (No. 9 on map), and spreading eastward. It is difficult to give any eastern boundaries of this shell, as

¹Specimens of *P. acuta* were taken near Hope Bay, on the north coast in Portland parish, by C. W. Johnson and W. J. Fox, in 1891.—EDS.

²If *P. acuta* and *lucerna* are to be united, the latter will be the species, the former the variety, as *H. acuta* was described nearly fifty years later than *H. lucerna*.—EDS.

weathered specimens are occasionally found in Clarendon, and St. Catherine. Prof. C. B. Adams, who was unacquainted with *bainbridgei* of Pfeiffer, mistook the nearly allied Manchester species for it, and coming across the albino form, described it as the var. *pretiosa* of *bainbridgei*; consequently, his varietal name must be used to designate this species, which is usually of a rich chocolate color.

10. *Pleurodonte spengleriana* (No. 10 in map) is the St. Elizabeth species, and is readily distinguished by its smooth surface.

Before closing these notes I must acknowledge the kindly aid my Master in Conchology, Mr. Henry Vendryes, has always so generously given me. Had it not been for his help I should never have been able to send these communications. I must also acknowledge the aid my friend, Mr. Geo. Nutt, has given in helping me to map out most of the groups of Jamaican land shells.

NOTICES OF NEW LAND SHELLS OF THE JAPANESE EMPIRE.

BY H. A. PILSBRY.

Mandarina hirasei n. sp. Shell umbilicate, depressed-globose, solid and strong, smoothish, slightly marked with growth-striæ, and under a lens seen to be densely striate spirally. Spire low-conoidal, the apex obtuse. Whorls $4\frac{1}{2}$, the last rounded peripherally and beneath, slightly descending in front. Aperture quite oblique, rounded-truncate; peristome thick, expanded, narrowly reflexed below, a little dilated at the columellar insertion, partially covering the umbilicus. Alt. 13, diam. 21 mm.

Chichijima, Ogasawara (Mr. Y. Hirase, No. 860).

Quite unlike any of the known species. The specimens are dead, without cuticle, and white. Like *M. ruschenbergeriana* and *M. palasiana*, the species is probably extinct.

Hirasea diplomphalus n. sp. Shell very small, shaped like an Ammonite or like *Diplomphalus*, the base perforate, spire rather narrow and deeply sunken, periphery broadly rounded. Whorls $4\frac{1}{2}$, the last sub-angular above. Aperture vertical, narrowly crescentic, the outer lip thickened with a white rib within except near the upper termination. Alt. 3.2, diam. nearly 2 mm.

Chichijima, Ogasawara (Mr. Hirase, No. 863).

Hirasea goniobasis n. sp. Shell sub-perforate, dull brown, acutely